



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,165	09/12/2003	Cheng-Te Chuang	MTKP0047USA	2164
27765	7590	10/04/2005	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			MCLEAN MAYO, KIMBERLY N	
			ART UNIT	PAPER NUMBER
			2187	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/605,165	Applicant(s) CHUANG ET AL.	
	Examiner Kimberly N. McLean-Mayo	Art Unit 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                              |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/30/05</u> . | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

1. The enclosed detailed action is in response to the Information Disclosure Statement submitted on June 1, 2004, the Priority Papers submitted on September 24, 2003 and the Application submitted on September 12, 2003.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1-4 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Ahn (USPN: 6,564,283).

Regarding claims 1-2 and 4, Ahn discloses a method for managing an external memory of a microprocessor to achieve more available capacity comprising an address translator and using the address translator to translate a page [memory bank] of the external memory and an address within the page pointed to by the processor to a physical address of the external memory (Figure 2A, 2B; C 1, L 52-64), each common area (interrupt routine area) pointed to by the microprocessor being mapped to a section of the external memory (C 1, L 64-67; the interrupt routines performed by the processor [and is thereby addressed/pointed to by the processor] are stored in reserved regions of the memory banks) and using the microprocessor to access data stored at the physical address of the external memory (the microprocessor generates the 16 bit

Art Unit: 2187

address for the external memory access which is used to access data stored in the external memory).

Regarding claim 3, Ahn discloses the external memory having a plurality of non-common areas (the remaining areas of the memory banks excluding the interrupt routines).

Regarding claim 8, Ahn discloses a chip [hardware] for performing the features in claim 1 (inherent).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn (USPN: 6,564,283) in view of Applicant's submitted prior art Intel Application Note Migrating from the MCS 8051 Microcontroller to the MCS 251 Microcontroller (8XC251SB) - software and hardware.

Regarding claims 5-6, Ahn discloses the limitations cited above, however, Ahn does not disclose using a 8 bit microprocessor nor using a MCS series microprocessor. However, Intel discloses that the MCS 251 8 bit processor is a low-cost, low-risk, easy and high performance controller (Introduction; page 4 and 5). Hence, it would have been obvious to one of ordinary skill in the

art to use Ahn's teachings with a MCS 8 bit processor for the desirable purpose of low risk, low cost and high performance.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn (USPN: 6,564,283)

Regarding claim 7, Ahn discloses the limitations cited above, however, Ahn does not explicitly disclose a flash memory device. Flash memory devices are well known in the art for retaining data stored therein when the device is not being powered. Thus, it would have been obvious to one of ordinary skill in the art to use a flash memory in the system taught by Ahn for the desirable purpose of data retention upon power loss.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

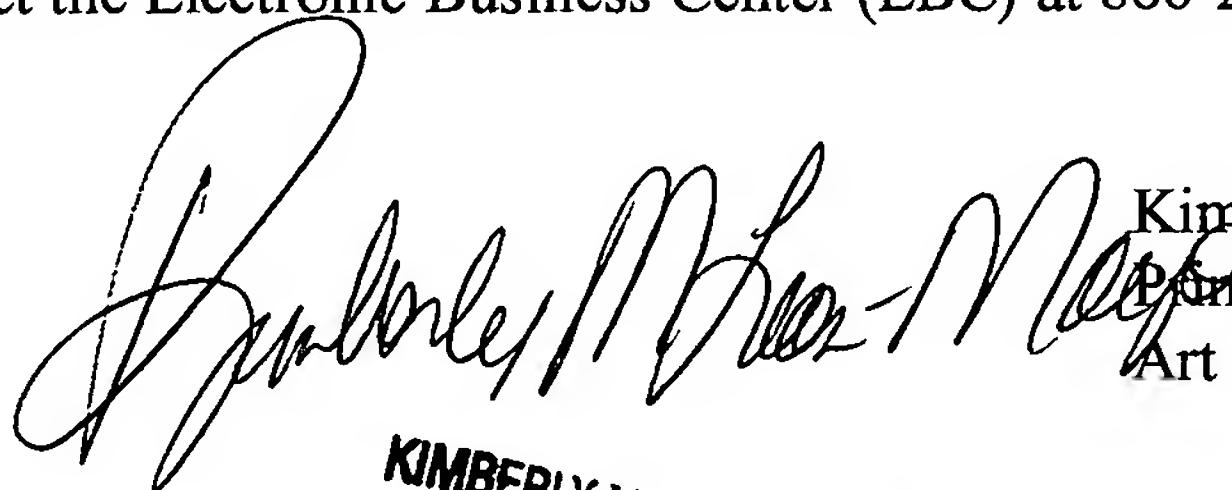
NOMOTO, KAZUNORI - JN 5-46473 – expanding external memory and bank switching

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 571-272-4194. The examiner can normally be reached on Mon (10-4), Tues, Thu (10-2), Fri (10-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2187

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kimberly N. McLean-Mayo  
Primary Examiner  
Art Unit 2187  
**KIMBERLY MCLEAN-MAYO**  
**PRIMARY EXAMINER**

KNM

September 30, 2005